

Claim 2. Please Cancel

Claim 3. Please Cancel

Claim 4, line 1, change "3" to --1--

Claim 6, line 1, change "3" to --1--

Claim 9, line 1, change "2" to --1--

Claim 16, line 1, change "3" to --1--


REMARKS

Claim 1 has been amended to contain the limitations of Claims 2 and 3 which are cancelled to place this application in condition for allowance as stated by the Examiner.

For the above reasons this application is believed to be in condition for allowance and such action at an early date is respectfully solicited.

Respectfully submitted,


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CERTIFICATE OF MAILING

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7-24-03
Date


Signature

Revised Claims

1. A rechargeable, alkaline battery including an anode electrode, a cathode electrode, said electrodes being
5 separated by a stack of at least 2 hydrogen permeable regenerated cellulose films, at least one of the films containing a dispersion of salt particles and the films including domains permeable to hydrogen gas.
- 10 2.
- 3.
4. A battery according to Claim 1 in which the anode
15 electrode contains zinc and one of the regenerated cellulose films contains a dispersion of copper salt particles.
5. A battery according to Claim 4 further including a film of regenerated cellulose containing a dispersion of particles of metal sulfide that react with copper ions to
20 form copper sulfide.
6. A battery according to Claim 1 in which the cathode electrode contains silver and one of the regenerated cellulose films contains a dispersion of fluoride salt particles.
- 25 7. A battery according to Claim 1 in which the stack of regenerated cellulose films further includes at least one hydrogen permeable layer of hydrocarbon polymer.
8. A battery according to Claim 7 containing 1-5 layers of the hydrocarbon polymer.
- 30 9. A battery according to Claim 1 in which the stack contains at least one hydrogen-permeable regenerated cellulose film absent salt particles.

10. A battery according to Claim 9 in which the regenerated cellulose film absent salt particles is disposed between the copper salt containing regenerated cellulose film and the anode.

5 11. A battery according to Claim 5 in which the copper salt containing regenerated cellulose film is disposed between the metal sulfide salt containing regenerated cellulose film and the fluoride salt particles containing regenerated cellulose film.

10 12. A battery according to Claim 8 in which a layer of hydrogen permeable hydrocarbon polymer is disposed between the copper salt containing regenerated cellulose film and the metal sulfide containing regenerated cellulose film.

15 13. A battery according to Claim 8 in which the hydrocarbon polymer is a polyalkylene of a monomer containing 2-8 carbon atoms.

14. A battery according to Claim 13 in which the hydrocarbon polymer is selected from the group consisting
20 of polyethylene and polypropylene.

15. A battery according to Claim 1 in which the films have a thickness from 10 to 250 microns.

16. A battery according to Claim 1 in which the regenerated cellulose film contains from 10 to 80 parts by
25 weight of the hydrogen permeable domains based on 100 parts of regenerated cellulose.

17. A battery according to Claim 16 in which the domains comprise a cellulose ether.

18. A battery according to Claim 17 in which the
30 ether is ethyl cellulose.

19. A battery according the Claim 6 in which the regenerated cellulose film adjacent the cathode contains a

Claims

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1. A rechargeable, alkaline battery including an anode electrode, a cathode electrode, said electrodes being separated by a stack of ^{at least 2} hydrogen permeable regenerated cellulose films, ^{at least one of the films containing a dispersion of salt particles and the films including domains permeable to hydrogen gas.}
2. A battery according to Claim 1 in which at least one of the ~~films~~ ^{cancel} contains a dispersion of salt particles.
3. A battery according to claim 2 in which the stack includes ~~at least 2~~ ^{cancel} regenerated cellulose films and the films include domains permeable to hydrogen gas.
4. A battery according to claim ~~3~~ in which the anode electrode contains zinc and one of the regenerated cellulose films contains a dispersion of copper salt particles.
5. A battery according the Claim 4 further including a film of regenerated cellulose containing a dispersion of particles of metal sulfide that react with copper ions to form copper sulfide.
6. A battery according to claim ~~3~~ ¹ in which the cathode electrode contains silver and one of the regenerated cellulose films contains a dispersion of a fluoride salt particles.
7. A battery according to Claim 1 in which the stack of regenerated cellulose films further includes at least one hydrogen permeable layer of hydrocarbon polymer.
8. A battery according to Claim 7 containing 1-5 layers of the hydrocarbon polymer.
9. A battery according to Claim ~~2~~ ¹ in which the stack contains at least one hydrogen-permeable regenerated cellulose film absent salt particles.

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10. A battery according to Claim 9 in which the regenerated cellulose film absent salt particles is disposed between the copper salt containing regenerated cellulose film and the anode.

11. A battery according to Claim 5 in which the copper salt containing regenerated cellulose film is disposed between the metal sulfide salt containing regenerated cellulose film and the fluoride salt particles containing regenerated cellulose film.

12. A battery according to Claim 8 in which a layer of hydrogen permeable hydrocarbon polymer is disposed between the copper salt containing regenerated cellulose film and the metal sulfide containing regenerated cellulose film.

13. A battery according to Claim 8 in which the hydrocarbon polymer is a polyalkylene of a monomer containing 2-8 carbon atoms.

14. A battery according to Claim 13 in which the hydrocarbon polymer is selected from the group consisting of polyethylene and polypropylene.

15. A battery according to Claim 1 in which the films have a thickness from 10 to 250 microns.

16. A battery according to Claim ~~3~~¹ in which the regenerated cellulose film contains from 10 to 80 parts by weight of the hydrogen permeable domains based on 100 parts of regenerated cellulose.

17. A battery according to Claim 16 in which the domains comprise a cellulose ether.

18. A battery according to Claim 17 in which the ether is ethyl cellulose.

19. A battery according the Claim 6 in which the regenerated cellulose film adjacent the cathode contains a